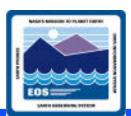


PRODUCTION PLANNING AND PROCESSING

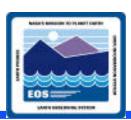
ECS Pre-Release B Testbed Training

Overview of Lesson



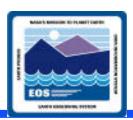
- Introduction
- Creating/Updating a Production Request
- Creating a New Production Plan
- Reviewing Data Processing Requests
- Reviewing a Plan Timeline
- Production Planning Scenarios
- Configuring AutoSys Screens/Displays
- Reviewing Hardware Status, DPR
 Dependency, DPR Production Timeline,
 Alarms, and Job Activities

Overview of Lesson (Cont.)



- Modifying Job Priority
- Modifying Job Status
- Reviewing Activity and Job Dependency Logs
- Generating Production Reports
- Defining and Running Monitors/Browsers
- Changing the Database Maintenance Time
- Production Processing Scenarios

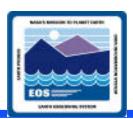
Overview of Lesson (Cont.)



Practical Exercise

- Creating a New Production Request
- Editing/Modifying a Production Request
- Creating a New Production Plan
- Reviewing Data Processing Requests
- Reviewing a Plan Timeline
- Configuring AutoSys Runtime Options
- Configuring Hardware Groups
- Reviewing Hardware Status and Changing Hardware Status Views
- Reviewing DPR Dependencies
- Reviewing the DPR Production Timeline

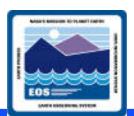
Overview of Lesson (Cont.)



Practical Exercise (Cont.)

- Reviewing Alarms and Configuring Alarm Selection
- Reviewing Job Activities and Job Selection Criteria
- Modifying Job Priority
- Modifying Job Status
- Reviewing Activity Logs and Job Dependency Logs
- Generating Standard Production Reports
- Generating AutoSys Reports
- Defining and Running Monitors/Browsers
- Changing the Database Maintenance Time

Objectives



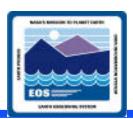
OVERALL:

 Develop proficiency in the procedures that apply to production planning and production processing operations

• SPECIFIC:

- Perform the steps involved in...
 - » creating a new production request
 - » modifying a production request
 - » creating a new production plan
 - » reviewing data processing requests
 - » reviewing a production plan timeline
 - » configuring AutoSys runtime options
 - » configuring AutoSys hardware groups

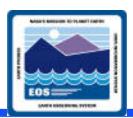
Objectives (Cont.)



SPECIFIC (Cont.):

- Perform the steps involved in...
 - » reviewing hardware status (including changing hardware status views) using AutoSys
 - » reviewing data processing request (DPR) dependencies
 - » reviewing the DPR production timeline
 - » reviewing and configuring AutoSys alarms
 - » reviewing job activities and job selection criteria using AutoSys
 - » modifying job priority using AutoSys
 - » modifying job status using AutoSys
 - » reviewing activity logs and job dependency logs
 - » generating standard production reports

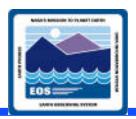
Objectives (Cont.)



• SPECIFIC (Cont.):

- Perform the steps involved in...
 - » generating AutoSys reports
 - » defining and running monitors/browsers
 - » changing the database maintenance time

Creating/Updating a Production Request (PR)



- Production planning at the Data Active Archive Centers (DAACs)
 - process by which the Production Planner notifies the Planning Subsystem (PLS) of the science processing jobs that are to be processed and when they are to be processed
- Science Software (SS)
 - does the actual data processing
 - is developed by satellite Instrument Teams (ITs)
 - is embodied in Product Generation Executives (PGEs) when the software is integrated into the ECS production processing environment

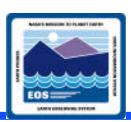


PGEs

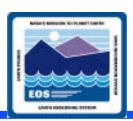
 science software code (e.g., executable programs or shell scripts) that contain the instructions for processing data to create the desired products

Production Request (PR)

- Production Planner defines ECS science data processing jobs in terms of PRs
- A PR is an order for data to be produced by the data processing system
- A single PR may specify...
 - » several jobs that are to be run over a period of time
 - » a single job producing a single set of data

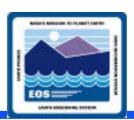


- Production Request (Cont.)
 - may apply to the processing of new data (standard PRs or standing orders)
 - may apply to the reprocessing of existing data (reprocessing PRs)
 - each PR identifies a specific PGE for generating a particular type of product
 - » some PGEs are dependent on others; i.e., some PGEs require input data that are the output of other PGEs
 - planning software will recognize and reject a PR when the PR specifies a PGE that requires data from another PGE that has not yet been specified in a PR



Planning Subsystem

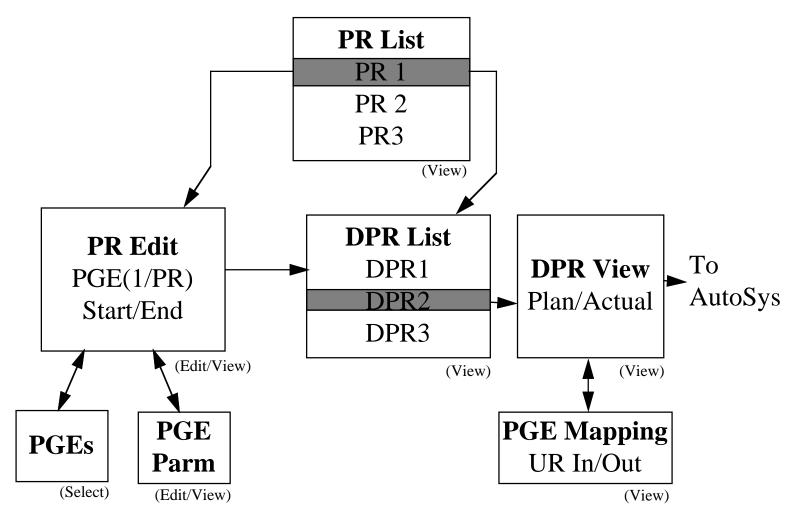
- uses each PR to generate either one or a series of Data Processing Requests (DPRs)
 - » each DPR corresponds to one execution of a single PGE
 - » each DPR contains the information that is needed by the SDPS processing function
- checks the availability of the data required for the DPR
- determines what data will be included in the DPR output
 - » so the system can make predictions concerning the future availability of data

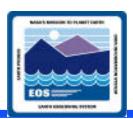


- Production Planner has access to the Planning Subsystem through...
 - Production Request Editor
 - Planning Workbench
 - UNIX commands
- Production Request Editor
 - used for creating or modifying PRs
- Planning Workbench
 - used for scheduling PRs

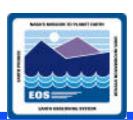
Creating/Updating a PR (Cont.): PRE Flow







- Production Planner must coordinate with the Resource Planner
 - before planning production
 - to resolve all resource allocation issues
 - obtain list of resources available for use in processing
 - obtain allocation profile with time for those resources

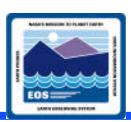


Monthly plans

- developed for the coming month and one or two months in advance
- produced, reviewed, updated, published and distributed approximately two weeks before the beginning of the month
- used to establish a baseline against which production targets can be measured

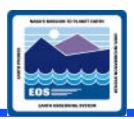
Weekly plans

- produced, reviewed, updated, published and distributed approximately five days before the beginning of the coming week
- used to produce a baseline for comparison of planned vs. actual production results



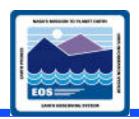
- Daily plan or schedule
 - produced each day for the next processing day
 - developed from the current weekly plan
 - » adjusted to reflect the actual processing accomplished and the actual resources available at the time the daily schedule is generated

Creating/Updating a PR (Cont.): Procedure



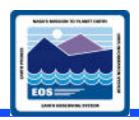
- Access the Production Request Editor from the UNIX command line
- Select the Production Request Editor
- Type the name of the PR in the PR Name field
 - Origination Date and Originator fields will be automatically filled when the Production Request is saved
- Type the priority for the PR in the Priority field
 - Priority field specifies the priority of the job with 1 (one) as the highest priority and 99 the lowest priority
- Click on the PGE... button to display the PGE Selection GUI

Creating/Updating a PR (Cont.): PR Editor Introductory GUI



		Production Request Editor	- 4
11e			<u>H</u> e1 ₁
Planning	PR Edit P	R List OPR View OPR List	
		Production Request Editor	
	Tab	Process	
	PR Edit:	Define/Edit Production Requests	
	PR List:	Review/Select/Modify Production Request	
	DPR View:	View/Inspect Data Processing Requests	
	DPR List:	Review/Select/Inspect Data Processing Request	ts
Status:			

Creating/Updating a PR (Cont.): PR Edit GUI



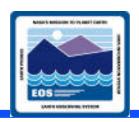
mondo de la			
rroduct10	n Request Identifi	Origination Date:	#N/A
R Nane: N	ew	Originator	: [
PGE		Priorit	PGE PGE Parameters
Durati	on		
Start:	Date:	Tine:	
End:	Date:	Tine:	
200.00			

Creating/Updating a PR (Cont.): PGE Selection GUI



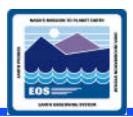
-		PGE Selec	tion	
PGE Selec	ction			
PGE Name	PGE Version	Satellite Name	Instrument Na	ane A
CERES_SUB1 CERES_SUB2 CERES_SUB3 CERES_SUB4	v1.0 v1.0 v1.0	TRIM TRIM TRIM TRIM TRIM TRIM	CERES CERES CERES CERES	
Find [
OK.		Cance	1	Help

Creating/Updating a PR (Cont.): PGE Parameter Mappings GUI



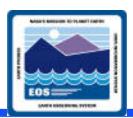
Parameter Mapping			
Ī.			
Parameter Name	Lonical In	l Default Value Override Value	Desc
Satelliteld	1200	9703381	NON
FirstMissionDay	1201	0	NON
ProcessFirstDayOnly	1202	ĭ	NON
fdf.next.nat.met	1248	1100:1	NON
ProcessEphemeris	1249	on	NON
Satelliteld	1250	107	NON
FirstMissionDay	1251	0	NON
QaWindowSize	1252	5	NON
QaShortGapInterval	1253	0.75	NON
QaLongGapInterval	1254	10.0	NON
QaRedLowAbsolute	1255	-1.0	NON
QaYellowLowAbsolute	1256	-0.5	NON
QaYellowHighAbsolute	1257	0.5	NON
QaRedHighAbsolute	1258	1.0	NON
QaYellowDifference	1259	0.5	NON
QaRedDifference	1260	1.0	NON
QaYellowSampleSD	1261	8,610	NON
QaRedSampleSD	1262	15.544	NON
EulerAngleOrder	1268	3,2,1	NON
attitude.next.nat	1298	1153:1	NON
ProcessAttitude	1299	on	NON
1			

Creating/Updating a PR (Cont.): Procedure



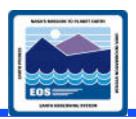
- Select the desired PGE from the list
- Click on the OK button to display the Production Request - PR Edit GUI page
- Click on the PGE Parameters... button
- If any PGE parameter(s) should be changed, select (highlight) a parameter to be changed
- Type the desired value in the Parameter Mapping field
- Click on the OK button to approve the changes

Creating/Updating a PR (Cont.): Procedure



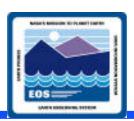
- Type the desired data in the following fields:
 - Duration Start Date
 - Duration Start Time
 - Duration End Date
 - Duration End Time
- Type any relevant comments in the Comments field
- Select File → Save As to save the production request

Editing/Modifying a PR: Procedure



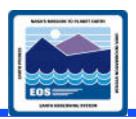
- Access the Production Request Editor using UNIX commands
- Select the Production Request Editor by clicking on the PR Edit tab
- Select File → Open then select the PR to be edited/modified
- If the PR's priority is to be changed, type the new priority in the Priority field
- If the PGE is to be changed, click on the PGE... button to display the PGE Selection GUI

Editing/Modifying a PR (Cont.): PR List GUI



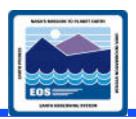
	Producti	on Request	Editor			
le <u>E</u> dit	= -=		Cr.			He
lanning PR Edi	t PR List	OPR View	DPR L	ist		
	Producti	on Reques	ts			
PR Nane	PGE ID	Priority	Start		End 03/22/96	
PR_TEST1_v1.0 PR_TEST2_v1.0 PR_TEST3_v1.0 PR_TEST4_v1.0	CERES_SUB1_v1.0 CERES_SUB2_v1.0 CERES_SUB2_v1.0 CERES_SUB3_v1.0 CERES_SUB4_v1.0	1	03/31/96 03/31/96 03/31/96	19:00:00 19:00:00 19:00:00	04/30/96 04/30/96 04/30/96 04/30/96	20: 20: 20:
Status:						

Editing/Modifying a PR (Cont.): Procedure



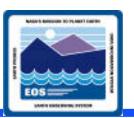
- Select the desired PGE by clicking on the appropriate row in the table
- Click on the OK button to display the Production Request - PR Edit GUI
- If any PGE parameter(s) should be changed, click on the PGE Parameters... button
- Select (highlight) a parameter to be changed by clicking on the corresponding row in the list of parameters
- Type the desired value in the Parameter Mapping field

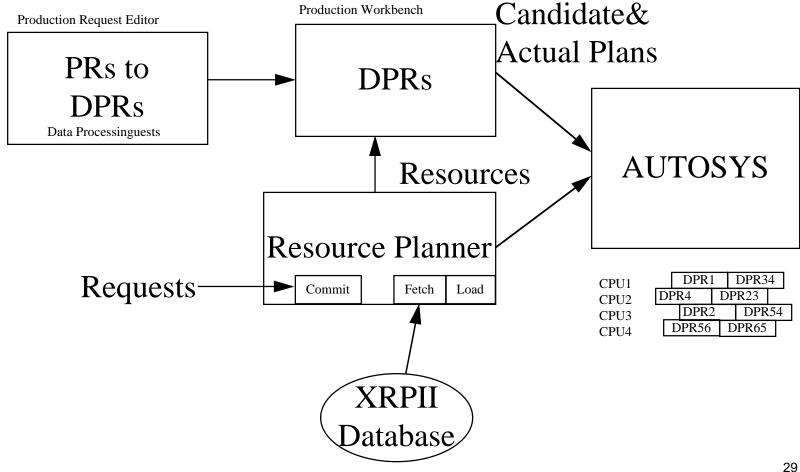
Editing/Modifying a PR (Cont.): Procedure



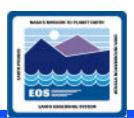
- Click on the OK button to approve the changes and display the Production Request
 - PR Edit GUI
- Type the desired data in the following fields:
 - Duration Start Date
 - Duration Start Time
 - Duration End Date
 - Duration End Time
- Type any relevant comments in the Comments field
- Select File → Save As to save the production request

Creating a New Production Plan: Planning Workbench



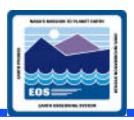


Creating a New Production Plan



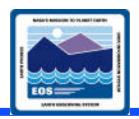
- Production Planner creates a plan for production data processing at the DAAC
 - selects specific PRs whose DPRs are to be run
 - selects PRs from two lists of PRs
 - » list of available "Unscheduled" PRs
 - » list of "Scheduled" PRs
 - uses arrow buttons to move PRs between lists until the "Scheduled" list contains the desired set of PRs that define the new plan

Creating a New Production Plan (Cont): Procedure



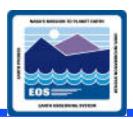
- Access the Planning Workbench using UNIX commands
 - If you want to "kill" (deactivate) the currently active production plan without activating a replacement, click on the Kill button
 - Whenever you activate a plan (by clicking on the Activate button), you automatically "kill" the currently active plan
- Select File → New from the pull-down menu
- Type a name for the new plan
- Click on OK

Creating a New Production Plan (Cont): Planning Workbench GUI



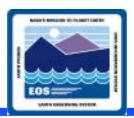
-	Planning Workbench	1.0
File Options		Help
Plan Name:	TEST PLAN	
	Smith Salver	
Status:	CANDIDATE	
Baseline		
Buserine		
Activate	Rollover Time:	
Kill		
KIH		
Connents:		
This is a produ	ction test plan.]	
inis is a produ	ceron test prant	
	Production Requests	
Unscheduled:		
NAME	PRIORITY	
New	1	1
NewTest	!	
PR_CERESS1_v1.0 PR_TEST3_v1.0		
PR_TEST4_v1.0	i	
	schedule: 🔻 unschedule: 🛦	
23323	and the second s	
Scheduled:		
NAME	PRIORITY	
PR_TEST1_v1.0	1	H
PR_TEST2_v1.0	31	
		U
	Continue of the continue of th	V.
	Prioritize Refresh	
-		

Creating a New Production Plan (Cont): Procedure



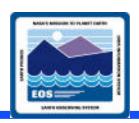
- Type any relevant comments in the Comments field
- Move PRs between the Unscheduled and Scheduled lists as necessary using the arrow buttons
- When the Scheduled list accurately reflects the PRs to be scheduled in the production plan, select File → Save (or File → Save As) to save the new production plan

Creating a New Production Plan (Cont): Procedure



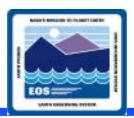
- If the new plan is to be activated immediately, click on the Activate button to activate the new plan
 - currently active plan is killed (deactivated) and the new plan is activated
 - Production Planning Timeline GUI is displayed
- If the new production plan is to be used as a baseline plan, click on the Baseline button
 - plan is recorded as well as the time of baselining so that it can be used in comparing future processing results with planned objectives

Creating a New Production Plan (Cont): Planning Timeline GUI



4									P	ienni	ng Ma	ster	Time	line: \	/iewi	ig PL	ANE																	
file Edit		me Plans																																
	01:01:90 00:00				00:	09								00	:18						00:27								00;36					
riel												GE,	12								1													
PU_mid_0	PROTECTION	PR_TINT2_FLB										GE	12								*	+							-					
PII_ariel_1	FR.TEST.215	FR.TESTZ.FIA										GE	12	9							10	*0		4	*		*	1	4					
PU_artel_2	PRITESTELVIA	PR.TEST2.314		-								GE.	12									21	1		-	•	1				•			
PU_sets[_3	PR_THRTS_PIA	PR_TINTS_FLE	*	+								GE	12								13	*	9	¥	+		+		,	4				
Pli_artel_4	PR. TESTS. PIA	PR_TESTS_PLA										GE,	12									*				•					٠			
PU_artel_5	PRITESTALPIA	APLSTRUT.01		4.								GE.	12									+	9	×.	1	•	40	-	•		•			
PU_artel_6	PE,7001,014	PR_31912_514		0.00								GE	12								2	100		000			0.00			370				
PII_ariet_7	PR.TESTS.210	PR.TESTS.31A		3								GE	12								3	+	•		16			.6	9	٠	•			
PU_artel_8	PR_TERTS_01A	PR_71972_514	100	*								GE	12								38		1	(*)			*			SE				
PU_mint_6	PR. JURE JIA	M. Marajira		+								GE	12											4		•	+			+	**	mm,ni		
ekko		200-1-01-0			V.							1000																						
PU_yakka_0	PERMITTER	PR_TINT2_518						1	1		10	-		40	+		1	+	+		100	+			1				-					
P0_yekko_1	PR_THREE_PEA	PR_TINTE_513					7		133	*3	0	31				120	13	+				+		,		0	•							
PU_yekko_2	PRITESTELVIA	PRITESTRUM					1	1					10	14	120			100	14		12	2		4	1		1			1				
PU_şakko_3	PR_THRTS_DIA	PR_TINTS_FLE	*	+	-	•	4	+	-	93	100	3	4	9	+	100	10	*	,	*	12	*	•	¥			4			4				
Ptl_yekko_4	PR.TESTS.PIA	PR_TESTS_PLA							•							-								J.S		•			100					
PU_yakko_S	PRITESTICALA	PR.TESTS.PLA	E	4		1	3.4		23	23		2	*	3	43	100	1			6	63	4	4	34			4.		1	4				
PU_yakko_6	PB_79870_994	PR_TINT2_518				28					100	100					IN.												100					
Pil_yakko_7	PR.TESTS.PIA	PR.TESTS.31A		13	1.5	•		1		10		3		4	1		13	+			13	+			×.			3						
PU_yakko_8	98,755TL915	FR.TESTS.JIA			٠	•					•				+		2.2	+		٠		+				•								
PU_yakka_9	PROTESTIA	PR_TISTS_FLS	+	+			*						+	9						+	13			+			+			+				
eree				•																														
W_heren_1	PR.70571.214	PR.TESTS.PIA		045	10					1		130	40	(4)	100	*	13		200		12						045	10	(0)	1				
PU_heres_2	PROTESTA	PR_TINTE_TIA	35.							10	0					100		+				+		,		0								
PU_lerin_3	PRITESELINA	PRITESTRATA					10.0								100	•		1				V												
PU_heree_4	PR_THRTS_DA	PR_TINTS_FLA		+		9	4		3	73		,	4	7	+				,		6	+		4		6	4		,	4				
Pil bene 5	PR_TIRTL_FIX	PR_TINTE_FLA					1				13			4			1																	
PU_heron_6	PRITESTALPIA	NU.STRITLES		4			4		-	2.5	•	-		3	4.	100				-	6	4	4	4		•	4		-	+				
PU_heres_7	PROTEIN DIA	PR_TINTS_514																			0													
indiameer				-				1	1	Total State of	Page 1	100 000	-		100	1000	-	1000		0,00	TO-COM	NAME OF TAXABLE	and the		1	-		10.000						
W windiamner 0	PR.TESTLANE	NICSTERNA		10					40						+			+	.+			+			1		4.							
PU_stedjerner_1	PR_TISTS_114	PERMITAIN					+			*			+				,							+						+				
			-	-		-					1000	-									-													

Creating a New Production Plan (Cont): Procedure



- If the production plan being displayed is active and should be deactivated, click on the Kill button
 - plan is deactivated without activating another plan